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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,569	12/12/2005	Hiroki Ito	81880.0134	6663

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LOS ANGELES, CA 90067

EXAMINER
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LAM, HUNG Q

ART UNIT	PAPER NUMBER
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2883

MAIL DATE	DELIVERY MODE
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08/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,569	<b>Applicant(s)</b> ITO ET AL.	
	<b>Examiner</b> Hung Lam	<b>Art Unit</b> 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/12/2005 and 01/16/2007</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of the Application***

Claims 1-9,11,13 and 14 are pending.

Claims 10 and 12 are canceled.

Claim 14 has been added.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on December 12, 2005 was filled in compliance with the provisions of 37 CFR 1.97. The examiner has considered the information disclosure statement.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/560,569, filed on December 12, 2005.

### ***Drawings***

The drawings submitted on the 12 of December 2005 are accepted as part of the formal application.

### ***Specification***

The specification is accepted as part of the formal application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

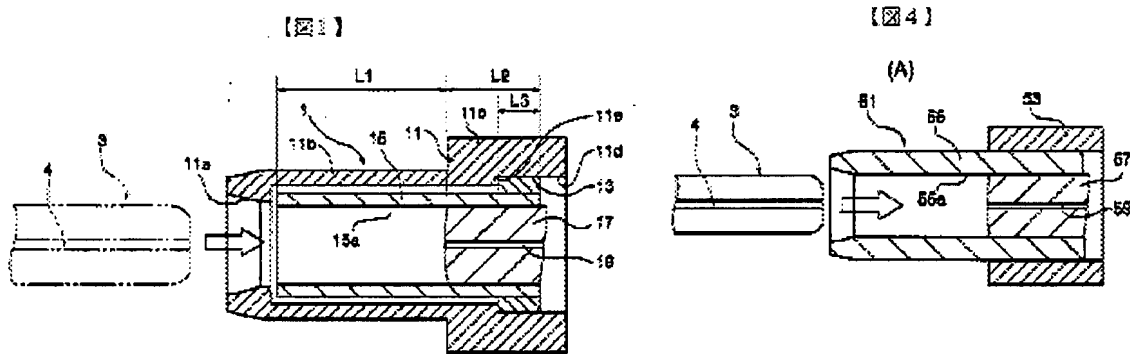
**Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishida Chisako** (JP. Pub. 10-332988) in view of **Uenoyama et al.** (JP. Pub. 2003-139994).

**Regarding claims 1-3**, **Ishida Chisako** discloses an optical receptacle device comprising the following:

- a fiber stub having ferrule 57 and optical fiber 59 inserted in the ferrule through-hole 57 ([0002], Fig. 4).

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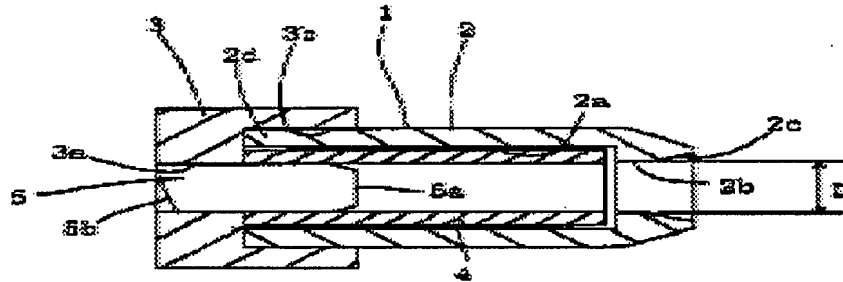
- a holder 53 holds to fix the rear end of the fiber stub ([0002], Fig. 4).
- an elastic sleeve 15 having 15a inner hole for ferrule 17 inserted in the end face side of the sleeve and the front face side is for holding a plug ferrule 3 ([0008], Fig. 1).
- a gripping/grasping ring or hold ring 13 is inserted/covered the outer periphery of the base end part of the fiber stub or the elastic sleeve 15 (abstract, Fig. 1, [0007]).
- the hold ring 13 or grip ring is fixed to the holes 11d ([0010]).
- the hold ring 13 or grip ring is made of plastic ([0009]), which “controls the elastic elongation/contraction of the base end part of the elastic sleeve 15, which renders the limitation of “the grip ring is an elastic body” (abstract, [0009]).



Reproduced from JP. Pub. 10-332988.

However, **Ishida Chisako** fails to disclose a holder to which a rear end of the fiber stub is directly fixed.

**Uenoyama et al.** teach an optical receptacle having an optical holder 23 which fixes a fiber stub 5 (single-core cylindrical optical ferrule 5) that rear end of the fiber stub 5 is directly fixed to the holder 3 (“Abstract”, and Fig. 4).



Reproduced from (JP. Pub. 2003-139994).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teachings of **Uenoyama et al.** to modify the optical receptacle holder of **Ishida Chisako** in order to fix the rear end of the fiber stub directly to the holder. The motivation for doing so is because of this arrangement realized a “...free of difficultly assembly” since “...the optical holder grasps the optical ferrule of a single alignment, and the sleeve which performs precision positioning of an optical ferrule...” (Uenoyama et al. “Abstract”, [0001]).

Regarding claim 14, in according to the discussion in the rejection of claim 1, **Ishida Chisako and Uenoyama et al.** further discloses the claimed invention, **except** for the grip ring is formed of a resin. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the grip ring with resin, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. The motivation for doing so is because resin is a well managed material that an operator would refer uses it to form the grip ring easily, since the grip ring is formed of the resin material, therefore, it make the grip ring to “...controls the elastic elongation/contraction of the base end part of the sleeve 15...” (Ishida’s “Abstract”).

**Claims 4-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishida Chisako** (JP. Pub. 10-332988).

**Regarding claims 4-5, Ishida Chisako** discloses an optical receptacle device comprising the following:

- a fiber stub having ferrule 57 and optical fiber 59 inserted in the ferrule through-hole 57 ([0002], Fig. 4).
- a holder 53 holds to fix the rear end of the fiber stub ([0002], Fig. 4).
- an elastic sleeve 15 having 15a inner hole for ferrule 17 inserted in the end face side of the sleeve and the front face side is for holding a plug ferrule 3 ([0008], Fig. 1).
- a gripping/grasping ring or hold ring 13 in this case is a thick component ([0015]) or thicker portion, which is pressed fit by the end section periphery of the elastic sleeve 15 that inserted the built-in ferrule of the fiber stub ([0007], [0009], Fig. 1).
- The length L3 of the grasping ring 13 or thicker portion of the sleeve is shorter than an insertion length L2 of fiber stub build-in sleeve 15 (claim 3, Fig. 1).

However, **Ishida Chisako** fails to teach that thicker portion 13 is formed integrally at the end of the sleeve 15.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the thicker portion is formed integrally at the end of the sleeve, since it has been held that forming in one piece an article which has formerly been in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). The motivation for doing so is to reduce the cost and labor as cut down the fabricating steps, and also make the sleeve more uniform that will promote for a simple and easier assembly process.

**Regarding claims 6-7**, in according to the discussion in the rejection of claim 4, **Ishida Chisako** discloses the claimed invention, **except** for the thicker portion being 1.5 to 2.5 times as thick as the other portion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the thicker portion be 1.5 to 2.5 times as thick as the other portion. The motivation for doing so is in order to protect elastic sleeve 15 from free of deformation [0007] and regulating elastic telescopic motion [0009], since it helps to reduce a transmission loss in an optical signal and to miniaturize it. Further more, it has been held that were the general conditions of a claims are disclose in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233), and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

**Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishida Chisako** in the view of **Kato et al.** (US. Pub. 2004/0076384).

**Regarding claim 8**, in according to the discussion in the rejection of claim 4, **Ishida Chisako** discloses all claimed invention, **except** for the chamfer of a corner around a front end of the fiber stub is 0.1mm or below.

**Kato et al.** teach that the corner around the ferrule 32 front end of the fiber stub is chamfered ([0047]) in ease to external connector, but the width of the chamfer.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teachings of **Kato et al.** in **Ishida Chisako**, by having the width of the chamfer corner around the front end of the fiber stub is to be 0.1 mm or below, since the ceramic is suitable for



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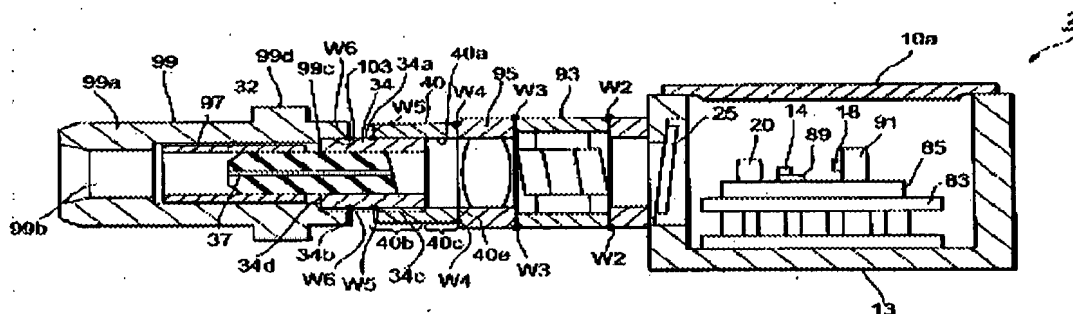
processing and has an excellent dimensional as mentioned at paragraph [0009] of Kato et al. Furthermore, the motivation for doing so is “in order to connect the optical module in ease to an external connector...” ([0047]), since it has been held that were the general conditions of a claims are disclose in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233), and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

**Claims 9, 11, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kato et al.** (US. Pub. 2004/0076384).

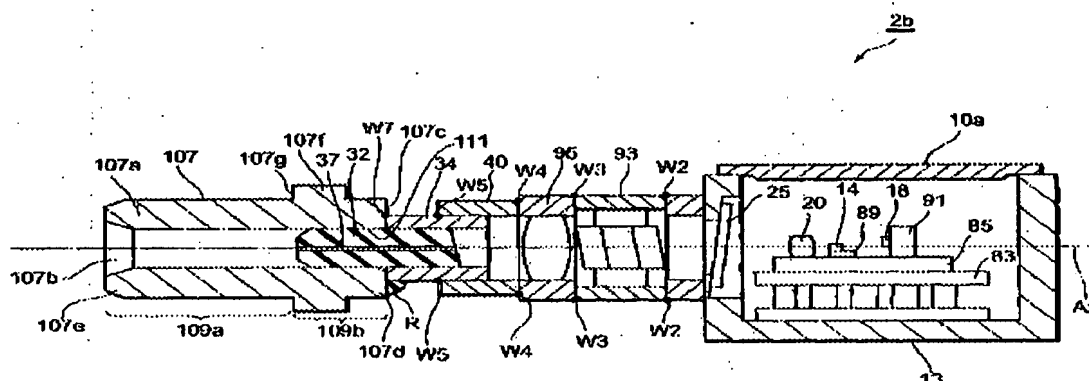
**Regarding claims 9, 11, Kato et al.** disclose the claimed invention such as:

- a ceramic precision sleeve 107 is made of ceramic material, for holding a plug ferrule ([0094], [0095], Fig. 11A, and Fig. 13). As known in the art, the ceramic is an electrical insulation material.
- a metal holder 34 is provided at a rear end of the precision sleeve 107 (“Abstract”, Fig. 11A, and Fig. 13).
- a flange/protruding portion 107f is formed integrally with the outer face of a ceramic precision sleeve 107 and separated/spaced from the metal holder 34 (Fig. 13) or the flange/protruding portion 99d “...provided on the outer surface of the side wall 99a” of the precision sleeve 99 ([0086], Fig. 11A). The flange/protruding portion is electrically insulated from the metal holder 34, since it is made of ceramic-an electric insulation material and also the ceramic precision sleeve 107 is adhered to the holder 34 by an adhesion resin ([0095]).

**Fig. 11A**



**Fig. 13**



Reproduce from US. Pub. 2004/0076384.

**Kato et al.** fail to teach that the flange is provided on an outer face of the precision sleeve separately.

It would have obvious to one having ordinary skill in the art at the time the invention was made to form the precision sleeve and the flange/protruding portion separately then put them together in one piece with same material of ceramic, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Further more, the motivation to doing so is in order to optimized the electrical insulation function and adding an extra support portion to the precision sleeve, and also allow the optical module facilitate the optical receiving and securing the optical receptacle optical connector by the means of the flange/protruding portion (Kato et al. [0086]).

**Regarding claim 13**, in according to the discussion in the rejection of claim 9, **Kato et al.** further disclose a ceramic ferrule 32 of the same material as the precision sleeve 107, and an optical fiber 37 is inserted in the hole 36 of the ferrule 32 ([Fig. 13, [0047]]). In additional, the ceramic ferrule 32 is inserted into the ceramic precision sleeve 107 ([0089]).

### ***Response to Amendment***

1. Applicant's arguments filed on May 23, 2007 have been fully considered but they are not persuasive as the following reasons:

Regarding to the arguments of claim 1, 4 and 9, in the light of the recent amendment. **Ishida Chisako** and **Uenoyama et al.** in combine were render the obvious over the limitations among these listed claims above which include the following limitation such as "...a holder to which a rear end of the fiber stub is directly fixed", and also render a reasonable to form a thicker portion integrally with the sleeve. For the amended limitation in claim 9, the examiner already stated in the first office action for the limitation of "...a flange which is electrically insulated...separately from the metal holder.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from

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the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Lam whose telephone number is 571-272-9790. The examiner can normally be reached on M - F 07:30 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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